Listing Of Claims

1. (Currently amended) A packet based display interface arranged to ~~couple~~ **connect** a **video source** ~~multimedia source device~~ **directly** to a **video display device** ~~multimedia sink device~~, comprising:

a transmitter unit coupled to the **video source** ~~source device~~ arranged to receive a **video** source packet data stream in accordance with a native stream rate;

a receiver unit coupled to the **video display** device; and

a linking unit coupling the transmitter unit and the receiver unit arranged to transfer a ~~multimedia~~ **video** data packet stream formed of a number of ~~multimedia~~ **video** data packets based upon the **video** source packet data stream in accordance with a link rate that is independent of the native stream rate between the transmitter unit and the receiver unit comprising: a unidirectional main link arranged to carry the ~~multimedia~~ **video** data packets from the transmitter unit to the receiver unit and a bi-directional auxiliary channel arranged to transfer information between the transmitter unit and the receiver unit and vice versa wherein the linking unit does not include a clock line.

2. (Currently amended) A packet based display interface as recited in claim 1, wherein the ~~multimedia~~ **video** data packet stream is one of a number of ~~multimedia~~ **video** data packet streams each having an associated adjustable data stream link rate that is independent of the native stream rate.

3. (Canceled).

4. (Currently amended) A display interface as recited in claim 1, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry information

from the ~~sink~~ **video display** device to the **video source** ~~source device~~ and a uni-directional forward channel included as part of the main channel for carrying information from the **video source** ~~source device~~ to the ~~sink~~ **video display** device in concert with the back channel.

5. (Currently amended) A display interface as recited in claim 2, wherein the main link unit further comprises:

a number of virtual links each being associated with a particular one of the **video** ~~multi media~~ data packet streams wherein each of said virtual links has an associated virtual link bandwidth and a virtual link rate.

6. (Original) A display interface as recited in claim 5, wherein a main link bandwidth is at least equal to an aggregate of the virtual link bandwidths.

7. (Currently amended) A display interface as recited in 1, wherein the ~~source~~ **video** data stream is packetized over a respective virtual link based upon a mapping definition.

8. (Currently amended) A display interface as recited in claim 1, further comprising:

a hot plug event detector unit arranged to automatically determine when an active **display** ~~sink~~ device is connected to the linking unit.

9. (Currently amended) A display interface as recited in claim 2, wherein the information includes display timing information used by the **display** ~~sink~~ device to provide a displayed image based upon the received data stream.

10 (Previously presented) A display interface as recited in claim 1, wherein the information includes sync loss information, dropped packets information and results of training sessions information.

11. (Currently amended) A display interface as recited in claim 2, wherein the ~~**multimedia**~~ **video** data packet transfer is an isochronous type transfer that includes a video/graphics data stream and a multichannel audio stream and wherein the information transfer is an asynchronous transfer.

12. (Original) A display interface as recited in claim 1, wherein the link rate is adjustable in a range of approximately 1.0 Gigabits per second (Gbps) to approximately 2.5 Gbps.

13. (Original) A display interface as recited in claim 1, wherein the receiver unit includes a time-base recovery unit arranged to regenerate a particular data stream's native rate based upon a time stamp embedded within the main link data packets.

14.- 16. (Canceled).

17. (Previously presented) A display interface as recited in claim 1, wherein a native audio stream rate is calculated based upon the audio sample rate, the number of bits per sample and the corresponding link rate.

18. (Currently amended) A display interface as recited in claim 2, wherein the number of ~~**multimedia**~~ **video** data streams are multiplexed to form a single data stream suitable for transmission over the linking unit.

19. (Currently amended) A display interface as recited in claim 1, wherein some of the **video** ~~**multimedia**~~ data packets include a number of sub-packets.

20. (Currently amended) A display interface as recited in claim 19 further comprising:

a selective refresh unit included in the ~~**sink**~~ **video display** device that updates only a portion of a displayed graphics image for every video frame based upon a number of image coordinates corresponding to the updated portion of the displayed image by way of sub-packets included in a corresponding video data stream.

21. (Currently amended) A packet based method of coupling a ~~**multimedia**~~ **video** source device to a ~~**multimedia sink**~~ **video display** device, comprising:

providing a **video** source device having a transmitter unit coupled thereto;

providing ~~**sink**~~ **video display** device having a receiver unit coupled thereto;

receiving a ~~**source**~~ **video** data stream in accordance with a native stream rate by the transmitter unit;

~~**coupling**~~ **connecting** the transmitter unit and the receiver unit by way of a linking unit wherein the linking unit does not include a clock line;

forming a ~~**multimedia**~~ **video** data packet stream formed of a number of ~~**multimedia**~~ **video** data packets based upon the ~~**source**~~ **video** data stream; and

transferring the ~~**multimedia**~~ **video** data packet stream in accordance with a link rate between the transmitter unit and the receiver unit**, wherein the link rate is independent of the native stream rate**.

22. (Currently amended) A method as recited in claim 21, wherein the ~~multimedia~~ **video** data packet stream is one of a number of ~~multimedia~~ **video** data packet streams each having an associated adjustable data stream link rate that is independent of the native stream rate.

23. (Currently amended) A method as recited in claim 21, further comprising:

providing a unidirectional main link arranged to carry the ~~multimedia~~ **video** data packets from the transmitter unit to the receiver unit; and

providing a bi-directional auxiliary channel arranged to transfer information between the transmitter unit and the receiver unit and vice versa.

24. (Currently amended) A method as recited in claim 23, wherein the bi-directional auxiliary channel is formed of a uni-directional back channel configured to carry information from the **video display** ~~sink~~ device to the **video** source device and a uni-directional forward channel included as part of the main channel for carrying information from the **video** source device to the ~~sink~~ **video display** device in concert with the back channel.

25. (Currently amended) A method as recited in claim 22, wherein the main link unit further comprises:

a number of virtual links each being associated with a particular one of the **video** ~~multi media~~ data packet streams wherein each of said virtual links has an associated virtual link bandwidth and a virtual link rate.

26. (Original) A method as recited in claim 25, wherein a main link bandwidth is at least equal to an aggregate of the virtual link bandwidths.

27. (Currently amended) A method as recited in 21, wherein the **video** source data stream is packetized over a respective virtual link based upon a mapping definition.

28. (Currently amended) A method as recited in claim 21, further comprising:

automatically determining when an active ~~sink~~ **video display** device is connected to the linking unit by a hot plug detector unit.

29. (Currently amended) A method as recited in claim 22, wherein the information includes display timing information used by the ~~sink~~ **video display** device to provide a displayed image based upon the received data stream.

30. (Original) A method as recited in claim 21, wherein the information includes sync loss information, dropped packets information and the results of training sessions information.

31. (Currently amended) A method as recited in claim 22, wherein the ~~multimedia~~ **video** data packet transfer is an isochronous type transfer that includes a video/graphics data stream and a multichannel audio stream and wherein the information transfer is an asynchronous transfer.

32. (Original) A method as recited in claim 21, wherein the link rate is adjustable in a range of approximately 1.0 Gigabits per second (Gbps) to approximately 2.5 Gbps.

33. (Original) A method as recited in claim 21, wherein the receiver unit includes a time-base recovery unit arranged to regenerate a particular data stream's native rate based upon a time stamp embedded within the main link data packets.

34. – 36. (Canceled).

37. (Previously Presented) A method as recited in claim 21, wherein a native audio stream rate is calculated based upon the audio sample rate, the number of bits per sample and the corresponding link rate.

38. (Currently amended) A method as recited in claim 22, wherein the number of ~~multimedia~~ **video** data streams are multiplexed to form a single data stream suitable for transmission over the linking unit.

39. (Currently amended) A method as recited in claim 21, wherein some of the ~~multimedia~~ **video** data packets include a number of sub-packets.

40. (Currently amended) A method as recited in claim 39 further comprising:

a selective refresh unit included in the ~~sink~~ **video display** device that updates only a portion of a displayed graphics image for every video frame based upon a number of image coordinates corresponding to the updated portion of the displayed image by way of sub-packets included in a corresponding video data stream.

41. (Currently amended) A packet based video interface for ~~coupling~~ **connecting** a **video** source device ~~and~~ **to** a display device, comprising:

a source **video** application layer arranged to provide a source **video** data stream, a data stream format, a number of data stream attributes, and a stream identification number;

a source **video** link layer coupled to the source **video** application layer arranged to provide link initialization and video interface management functions;

a source **video** physical layer coupled to the source **video** link layer that includes,

a source **video** logical layer arranged to at least packetize/depacketize **video** data, scramble/unscramble **video** data, generate link training patterns, encode and decode **video** data, and

a source **video** electrical layer that includes circuitry for initialization, parallel to serial and serial to parallel conversions, and spread spectrum capable PLLs;

a bidirectional auxiliary channel coupling the source **video** physical layer and a **video** display device physical layer arranged to transmit information between the source **video** physical layer and the **video** display device physical layer and vice versa; and

a unidirectional main link coupling the coupling the source **video** physical layer and the **video** display device physical layer arranged to transmit information ~~**between**~~ **from** the source **video** physical layer and the **video** display device physical layer **at a link rate that is independent of a native stream rate**, wherein neither the bidirectional auxiliary channel nor the unidirectional main line include a clock line.

42. (Currently amended) A packet based video interface as recited in claim 41, further comprising:

a **video** display device application layer arranged to provide a set of display attributes to the source **video** application layer; and

a **video** display device link layer coupling the **video** display device application layer to the **video** display device physical layer.

43. (Currently amended) A packet based video interface as recited in claim 42, wherein the **video** display device application layer and the source **video** application layer are each an

application programming interface that describes a format for the source **video** data stream and the **video** display device.

44. – 47. (Canceled).